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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,925	07/28/2004	Jann Schmidt	255898US0PCT	2156
22850 7590 10/02/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER CHANG, VICTOR S				
ART UNIT 1794		PAPER NUMBER		
NOTIFICATION DATE 10/02/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/501,925

**Applicant(s)**

SCHMIDT ET AL.

**Examiner**

VICTOR S. CHANG

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Introduction***

1. In view of the Appeal Brief filed on 7/17/2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

2. Claims 1-20 are active.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. After a careful review, the grounds of rejection have been updated as set forth below. Rejections not maintained are withdrawn.

***Specification***

5. Claims 7 and 8 are objected to because of the following informalities:

For claim 7, it is noted that nonuniform surface structures of prior art are described in the specification page 1, and the effect is discussed as “nevertheless comprised by statistical damage to the surface which occurs in the course of time.” Since throughout the specification, the instant invention is described as having uniform surface structurings, and the discussion regarding prior teaches away from the use of nonuniform surface structure, claim 7 lacks support in the specification.

For claim 8, similarly, the recited “point form” and “line form” are absent from the specification. Appropriate correction is required in the next reply.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 7 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

More particularly, since support for claims 7 and 8 are absent from the specification, as set forth above, they are not enabled.

***Rejections Based on Prior Art***

8. Claims 1-6 and 9-19 are rejected under 35 U.S.C. 103(a) as being obvious over Khanarian [US 5881201] in view of Yoshikawa et al. [US 6215936].

Khanarian relates to a light guide or light diffusion plate of a backlight system [col. 1, ll. 5-8; col. 4, ll. 6-7]. Figs. 3A and 3B illustrate that the light guide consists of a sheet which has one or more edge where the light enters (entry surface) and a surface where the light exits (exit surface). The light exiting through the exit surface is substantially spatially uniform in brightness [col. 2, ll. 47-61]. The composition for the light guide generally contains the transparent polymer and the light scattering particles in weight ratio from 85:15 to 99.99:0.01 [col. 4, ll. 65 through col. 5, ll. 1]. Useful transparent polymers include polyacrylate, such as PMMA, etc. [col. 4, ll. 40-43]. Useful light scattering particles have an average size in the range of from 0.01-10  $\mu\text{m}$  [col. 4, ll. 10], such as core shell (spherically shaped) modifiers [col. 4, ll. 26-34]. Figs. 3A and 3B are schematic side view representations of one wedge shaped light guide and two wedge shaped light guide. In order to improve the uniformity of the light, a diffuser may be used for homogenization of light [col. 3, ll. 62-63].

For claims 1, 2, 6-11 and 19, Khanarian lacks teachings that 1) the ratio of the light exit surface area to the light entry surface area being at least 4, and 2) the light-exit surface is provided with structurings having a depth in the range of from 0.1  $\mu\text{m}$  to 1,000  $\mu\text{m}$ . However, regarding 1), Figs. 3A and 3B illustrate that the light exit surface is substantially greater than the light entry surface. Furth, since Khararian teaches the same subject matter as the claim invention, a workable ratio between the exit and entry surfaces is deemed to be an obviously provided by practicing the invention of prior art. Regarding 2), Yoshikawa's invention relates to

a light guide of a backlight system. Figs. 1b illustrates a plurality of fine patterns on the light emitting (exit) surface of the light guide. The patterns provide improved light uniformity. The shape of the patterns is not confined to be the same. Various patterns, such as specks, chain lines and straight line patterns, may be combined or the size and the width of the plurality of patterns may be changed, including uniform and nonuniform distributions [col. 5, ll. 55-59]. Molded pattern with surface roughness (depth) less than  $0.2\text{ }\mu\text{m}$  has been obtained [col. 10, ll. 35-36]. It would have been obvious to one of the ordinary skill in the art to modify the light exit surface of Khanarian with the patterns of Yoshikawa, motivated by the desire to obtain an improved light uniformity.

For claim 3, Khanarian teaches that the typical thickness of the light guiding layer is 1-4 mm [col. 6, ll. 31-33].

For claims 4 and 5, Khanarian teaches that the particles can be of plastic, such as polystyrene [col. 4, ll. 36]. Regarding the polystyrene being crosslinked, the examiner takes Official notice that since it is well known that crosslinking improves dimensional stability, it would have been an obvious selection to use a crosslinked polystyrene particle, motivated by the desire to obtain an improved consistency between production runs.

For claims 12 and 13, since Khanarian teaches the same subject matter of the same structure and composition, selecting workable refractive index and transmission properties are deemed to be obviously provided by practicing the invention of prior art for the same end use.

For claim 14, Khanarian shows in Fig. 3B an embodiment having a light-exit surface being perpendicular to the light-entry surface.

For claim 15, since the surface opposite the light entry surface is not shown to permit light exiting, it is interpreted as a reflector. Alternatively, the edge surface of the reflective layer in figures 3A and 3B at the entry surface is parallel to the light entry surface.

For claim 16, Khanarian teaches that the light guide body is made by molding.

For claim 17, the components (C) and (D) are interpreted to be zero and the components (A) and (B) are disclosed by Khanarian.

For claim 18, the light source is shown in figures 3A and 3B as CCFL, which is fluorescent light.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khanarian [US 5881201] in view of Japanese: 2000-13677 [English Abstract].

The teachings of Khanarian are again relied upon as set forth above.

Khanarian lacks a teaching that useful scattering particles include barium sulfate particles. However, the JP '677 teaches a light guide containing barium sulfate particles as the light diffusing medium. It would have been obvious to one having ordinary skill in the art to substitute barium sulfate particles, for the particles in Khanarian because selection and substitution of a known functionally equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

### ***Response to Arguments***

10. In view of the new reference Yoshikawa, Applicants' arguments directed to the "structurings" are moot.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICTOR S. CHANG whose telephone number is (571)272-1474. The examiner can normally be reached on 7:00 am - 5:00 pm, Tuesday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/  
Primary Examiner, Art Unit 1794

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